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TITLE : RED PHOSPHOR COMPRISING ALKALINE EARTH SULFIDE AS MAIN COMPONENT  
AND PROCESS FOR PRODUCING THE SAME

ABSTRACT : PROBLEM TO BE SOLVED: To provide a red phosphor that has not only high color purity but also good luminance and good efficiency under low-velocity electron excitation and to provide a process for producing the red phosphor with stability and good reproducibility.

SOLUTION: The red phosphor is represented by formula (1):(Ca,Sr)S:Eu,A,F, formula (2):(Ca,Sr)S:Eu,Rb,F or formula (3):(Ca,Sr)S:Eu,A,Rb,F wherein A is at least one kind of element selected from the group consisting of Al, Ga and In and is contained in an amount of 0.01-5 mol%; and Rb is contained in an amount of 0.01-2 mol%. For example, the red phosphor of formula (1) is produced by mixing a sulfide of Ca and/or Sr, a fluoride of at least one kind of element selected from the group consisting of Al, Ga and In, sulfur and a europium fluoride and subjecting the mixture to classifying and then calcining in an inert gas atmosphere.

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